

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2002322533
PUBLICATION DATE : 08-11-02

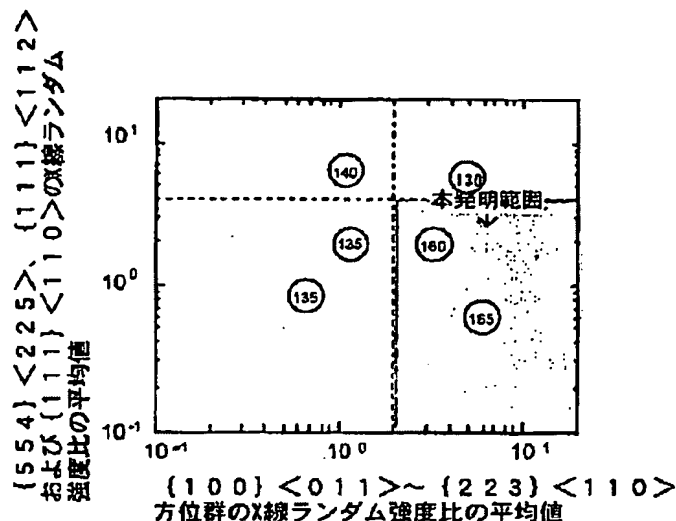
APPLICATION DATE : 16-08-01
APPLICATION NUMBER : 2001247306

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INT.CL. : C22C 38/00 B21B 1/26 C21D 8/02
C21D 9/46 C22C 38/06 C22C 38/58

TITLE : THIN STEEL SHEET FOR
AUTOMOBILE EXCELLENT IN NOTCH
FATIGUE STRENGTH AND
PRODUCTION METHOD THEREFOR



ABSTRACT : PROBLEM TO BE SOLVED: To provide a thin steel sheet for an automobile excellent in notch fatigue strength, and to provide a production method therefor.

SOLUTION: The thin steel sheet for automobile having excellent notch fatigue strength consists of steel having a composition containing 0.01 to 0.3% C, 0.01 to 2% Si, 0.05 to 3% Mn, $\leq 0.1\%$ P, $\leq 0.01\%$ S and 0.005 to 1% Al, and the balance Fe with inevitable impurities. The average value of the X-ray random intensity ratios in the orientation groups of $\{100\}\langle 011 \rangle$ to $\{223\}\langle 110 \rangle$ in the sheet surface thereof at an arbitrary depth till 0.5 mm from the outermost surface in the sheet thickness direction is ≥ 2 , and also, the average value of the X-ray random intensity ratios in the three orientations of $\{554\}\langle 225 \rangle$, $\{111\}\langle 112 \rangle$ and $\{111\}\langle 110 \rangle$ is ≤ 4 . The steel sheet has a sheet thickness of 0.5 to 12 mm. In the method for producing the same steel sheet, the steel having the above composition is rolled in the temperature region of the A_{r3} transformation temperature $+100^\circ\text{C}$ or lower at a total rolling reduction rate of $\geq 25\%$.

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